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ABSTRACT

This study was conducted to field-test collection mapping as an evaluation technique, to determine collection standards against which individual schools could compare themselves, and to compare the collections in schools to nationally-recommended lists published by Brodart and Wilson. Questionnaires were sent to 120 library media specialists in elementary, junior high, and high schools in 11 states. A total of 68 (37 elementary, 10 junior high, and 21 high schools) respondents provided sufficient data to be included. Survey areas included grade levels and number of students, total number of library media materials (categorized by Dewey Decimal System), and number of materials in both general and specific emphasis areas. Analysis of the data indicates that: (1) the average collection size ranged from 8,372 for elementary schools to 18,306 in high schools; (2) the greatest number of elementary schools (14) were in the range of 16 to 23.9 items per student as compared with the national recommended standard of 40 items per student; (3) 431 emphasis collections covering 134 discrete topics were identified; and (4) collections related to social science, reading, and literature predominated. Findings also indicate that school library media specialists build different collections from those recommended by national lists, and it is recommended that these lists be re-examined in light of current school curriculums. It is concluded that collection mapping is a viable and effective technique for collection analysis and management. Examples of collection maps and charts generated by a computer program written for this project in BASIC and a list of references are provided. (JB)

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# COLLECTION MAPPING IN SCHOOL LIBRARY MEDIA CENTERS

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# COLLECTION MAPPING IN SCHOOL LIBRARY MEDIA CENTERS

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Collection evaluation is a process that allows a school library media specialist to analyze the collection and its use in order to anticipate demand and shape it accordingly. This activity can help determine how the collection meets the personal and academic needs of the library users. Evaluation also demonstrates the extent to which the materials in the school media collection support the instructional goals of the curriculum (Mancall and Swisher, 1983, pp. 257-258). In an era demanding excellence and, at the same time, accountability, collection evaluation has been playing an important role in a school library media center.

For many years, collection size measure has often been the single most important way to evaluate the collection. Yet, simply measuring collection size is not sufficient enough to reflect how a collection matches the school & curriculum it is designed to serve. Nor can this measure clearly indicate the strengths, weaknesses, or balance of a collection. The collection mapping technique with its attendant quantitative and qualitative measures might be an answer to problems like these.

## Introduction of Collection Mapping Technique

The collection mapping technique was first designed by Dr. David Loertscher (in press) for guaging the potential of school library media collections to support the instructional program in schools. The basic theory behind mapping a school library media collection is based on the philosophy that a collection in a school should serve the curriculum. According to Loertscher, the total collection in a school library media center should be divided into three major divisions for the purpose of collection development: (1) A basic collection designed to serve a wide variety of interests and needs. This collection provides breadth. (2) General emphasis collections which contain materials that support a whole course of instructin such as U.S. History and beginning reading. These collections provide intermediate depth in a collection. (3) Specific emphasis collections which contain materials that support units of instruction such as "Civil War" or "dinosaurs." These collections provide full depth and support as advocated by the national standards. The mechanism by which a collection is divided into the three main collection

segments, evaluated and then managed has been titled collection mapping. Mapping the collections will help a library media specialist identify collection strengths which can be compared to the curriculum of the school. The library media specialist can also compare collection size in topical areas to a national sample of emphasis collections.

## Purposes of the Study

The purpose of the present study was designed to field test collection mapping as a technique and to collect enough data so that individual schools could compare their collections against a national pool of school collections. The study attempted to explore the following questions: What are the characteristics of school library collections when they are mapped? What types of collections do school library media specialists build? Can the collection mapping technique be applied to a large number of schools in various geographical locations? Can a national data pool be developed which will allow school library media specialists to compare their collections with a national sample? And, finally, how do the collections in schools compare to nationally recommended lists such as Brodart's Elementary School Library Collection (1984), the H.W. Wilson's Junior High School Library Catalog (1980), and Senior High School Library Catalog (1982)?

## Methodology of the Study

To explore these questions, questionnaires with cover letters were sent in October 1984 to 120 library media specialists in elementary, junior high, and high schools in 11 states (Arkansas, California, Colorado, Connecticut, Florida, Georgia, Indiana, Iowa, Oklahoma, Texas, and Wisconsin). Eighty schools returned the questionnaires. Of these, 68 provided sufficient data and were judged typical enough to be included in the study. These 68 schools included 37 elementary schools, 10 junior high schools, and 21 high schools.

There were four sections in the questionnaire. In Part 1, the library media specialist was requested to provide school name and address, the grade levels in the school, and the number of students. In Part 2, the respondent provided the total number of items in each of the following segments of the collection: reference, 000, 100, 200, 300, 398.2, 400, 500, 600, 700, 800, 900, biography, fiction, story collection, easy, periodicals, and professional collection. In Part 3 and Part 4, the respondent identified general and specific emphasis areas if there were any, and

indicated the total number of items in each of the areas identified. In the study, a general emphasis area was defined as a collection strength in a library media center to support courses of instruction, while a specific emphasis area supports a single unit of instruction.

A computer program written in Basic was designed by the researcher during the Summer of 1984. The program generated a collection map and a collection chart for each school (see Table 1 and 10 as examples). A sample collection map for a typical school is shown in Table 1.

Table 1 maps a collection into three segments: (1) The number of items per student in the total collection graphed horizontally at the base of the map. (2) General emphasis area collections which generally support courses of study mapped vertically on the left. In this case, animals and folklore & fairytales are charted. (3) Specific emphasis areas which generally support units of instruction mapped vertically on the right. In this collection three areas were identified: dinosaurs, frontier and pioneer life, and Indians of North America. The collection map shows the collection strengths in terms of size. For example, there are enough materials about Indians to merit a superior rating and might be recognized by other schools in the district as a source for supplementary materials.

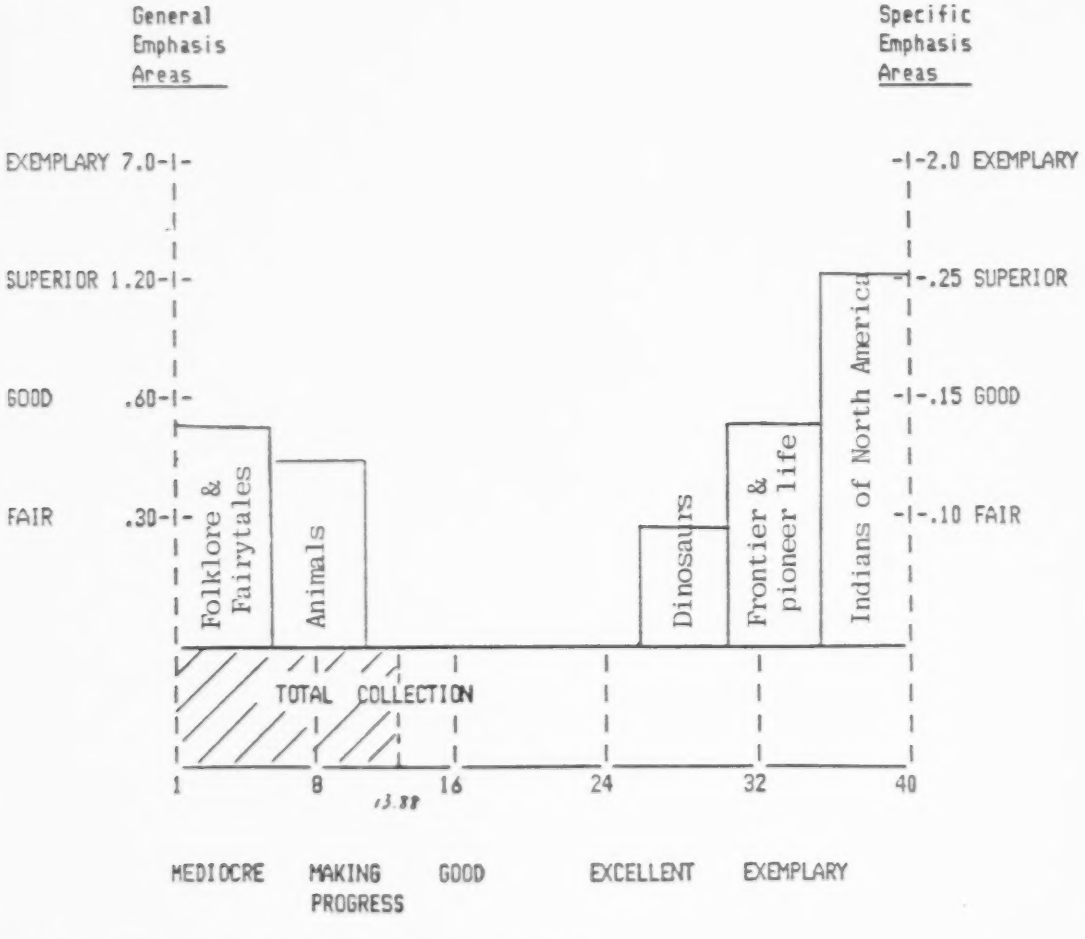
Creating the Collection Map Scales

One of the major purposes of the study was to establish the scales for the collection map segments, to give the scales reliability, and to provide a comparative picture across many schools. The national standard of 40 items per student was used as a guide to graph the total collection at the base of the map. The labels selected to denote progress in building collections were as follows: "Mediocre," "Making Progress," "Good," "Excellent," and "Exemplary." All segments of the collection were charted in items per student. Table 2 shows the five labels and the number of items designated for each label.

Table 1. COLLECTION MAP

School Name:
No. of Students: 597
Total Collection: 8289
No. of Total Collection Items Per Student: 13.88

| | # of items | # of items per student |
|---|---|---|
| General Emphasis Areas: | | |
| 1. Folklore & fairytales | 305 | .5108 |
| 2. Animals | 263 | .4405 |
| Specific Empnasis Areas: | | |
| 3. Dinosaurs | 53 | .0887 |
| 4. Frontier & pioneer life | 79 | .1323 |
| 5. Indians of North America | 150 | .2512 |




(Note: All numbers charted in items per student)

Table 2. Scale for the Total Collection Graph

| Label | Items/student |
|---|---|
| Mediocre | 1 - 7.9 |
| Making progress | 8 - 15.9 |
| Good | 16 - 23.9 |
| Excellent | 24 - 31.9 |
| Exemplary | 32 - 40 |

The creation of labels and scales for general and specific emphasis areas was more difficult since there was no standard or professional judgment in the literature to call upon for guidance. Four labels were chosen as indicative of emphasis area size: "Fair," "Good," "Superior," and "Exemplary." All of the emphasis collections in the participating schools were pooled to create the scales. Since there were two types of emphasis areas, e.g., general and specific, two pools were created. Each of the emphasis area collection sizes was divided by the number of students in each respective school and then pooled for comparison. The results revealed a tremendous difference between the largest and smallest emphasis collection sizes. Usually, a graphic scale would be divided into equidistant intervals for charting. In this case, however, such an equidistant scale proved inadequate. Therefore, the emphasis size figures were divided into four quartiles and the resulting numbers of items per student became the scale intervals. Table 3 shows the emphasis area scale intervals.

Table 3. Emphasis Collection Quartiles (Actual)

| | General Areas | Specific Areas |
|---|---|---|
| # of areas indicated | 258 | 204 |
| Mean items per student | 1.11 | .19 |
| Largest # of items per student | 15.62 | 2.05 |
| Lowest # of items per student | .01 | .01 |
| 1st quartile | .27 | .08 |
| 2nd quartile | .56 | .14 |
| 3rd quartile | 1.13 | .23 |
| 4th quartile | 15.62 | 2.05 |

In order to generalize the scales and make them practical for general usage, the scales were rounded as shown in Table 4.

Table 4. Rounded Empnasis Collection Quartiles

| Labels | General Areas | Specific Areas |
|---|---|---|
| Fair | 00 - .30 | 00 - .10 |
| Good | .31 - .60 | .11 - .15 |
| Superior | .61 - 1.20 | .16 - .25 |
| Exemplary | 1.21 - 7.00 | .26 - 2.00 |

Note: One school in the 4th quartile had a general emphasis collection so large (15.62 items per student) that it was eliminated when the quartiles were rounded.

Findings of the study

I. Total Collection Sizes Across Schools

After collections for all the participating schools were charted and mapped, the resulting data were analyzed across the schools. As is shown in Table 5, the average collection size ranged from 8,372 in elementary schools to 18,306 in high schools.

Table 5. Average Collection Size, Average Number of Items Per Student, and Average Emphasis Area Size of the Participating Schools

| Level | # of Schools | Avg. # of Students | Avg. Coll. Size | # of Items Per Student | Avg. Size of Emphasis Areas |
|---|---|---|---|---|---|
| Elementary | 37 | 432 | 8372 | 21.16 | 2680 |
| Junior High | 10 | 891 | 12521 | 16.31 | 2803 |
| High | 21 | 1257 | 18306 | 15.79 | 3571 |

When compared with the national recommended standard of 40 items per student, the greatest number of elementary schools (14 schools) were in the range of 16 to 23.9 items per student with the rating of "Good," while most of the participating junior high and senior high schools were in the range of 8 to 15.9 items per student with the rating of "Making Progress." Table 6 reports the number of schools in each of the rating categories.

Table 6. The Number of Collections in Five Size Categories

| Level | Mediocre | Making Progress | Good | Excellent | Exemplary | Total |
|---|---|---|---|---|---|---|
| Elementary | 0 | 10 | 14 | 11 | 2 | 37 |
| Junior High | 0 | 6 | 2 | 2 | 0 | 10 |
| High | 1 | 12 | 8 | 0 | 0 | 21 |

Scale:
Mediocre = 1 - 7.9 items/student
Making Progress = 8 - 15.9 items/student
Good = 16 - 23.9 items/student
Excellent = 24 - 31.9 items/student
Exemplary = 32 - 40 items/student

II. Emphasis Collections Across Schools

The collection mapping technique provided a unique way of comparing the strengths of collections across schools. Library media specialists were asked to identify emphasis collections which were defined as "topical collection segments larger than a 'typical' school might have." Library media specialists in the 68 schools identified 462 emphasis collections. After eliminating duplication and standardizing terminology, there were 134 discrete emphasis collections identified. Collections related to social science, science, reading and literature predominated. Table 7 itemizes the emphasis areas identified in the study.

Table 7. Emphasis Collections Reported in Participating Schools

| Area Name | Frequency |
|---|---|
| 1. SOCIAL SCIENCE | 134 |
| U. S. history (general) | 20 |
| States | 17 |
| Indians of North America | 14 |
| World War I & II | 8 |
| Countries | 7 |
| Blacks | 6 |
| Holidays | 6 |
| Civil War | 5 |
| Geography/travel | 5 |
| Presidents | 4 |
| World history | 4 |
| American government | 3 |
| Economics | 3 |
| North America | 3 |
| Middle ages | 2 |
| Political science | 2 |
| Revolutionary War | 2 |
| Social science (general) | 2 |
| U.S. history-20th century | 2 |
| Colonial America | 1 |
| Congress | 1 |
| Crime & criminals | 1 |
| Death education | 1 |
| Explorers | 1 |
| Frontiers & pioneers | 1 |
| Pioneer days | 1 |
| Political election | 1 |
| Renaissance History | 1 |
| Social interaction | 1 |
| Social problems | 1 |
| Sociology | 1 |
| Theodore Roosevelt | 1 |
| Travel | 1 |
| U.S. geography | 1 |
| U.S. foreign policy | 1 |
| U.S. history-1856- | 1 |
| U.S. history (The West) | 1 |
| Women | 1 |

| Area Name | Frequency |
|---|---|
| 2. SCIENCE | 112 |
| Animals | 44 |
| Astronomy | 11 |
| Science (general) | 8 |
| Computers | 6 |
| Earth science | 6 |
| Biology | 5 |
| Physical science | 4 |
| Insects | 3 |
| Mathematics | 3 |
| Medical science | 3 |
| Plants | 3 |
| Zoology | 3 |
| Botany | 2 |
| Diseases | 2 |
| Geology | 2 |
| Anthropology | 1 |
| Archeology | 1 |
| Construction | 1 |
| Horticulture | 1 |
| Industry | 1 |
| Invention & inventors | 1 |
| Natural history | 1 |
| 3. READING | 85 |
| Folklore & fairytales | 22 |
| Picture books | 10 |
| Beginning reading | 9 |
| Biography | 9 |
| Fiction | 9 |
| High/low reading | 6 |
| Children's authors | 5 |
| Award winning books | 4 |
| Jokes & riddles | 2 |
| Mystery & detective stories | 2 |
| Science fiction | 2 |
| Animal stories | 1 |
| Historical Fiction | 1 |
| Language arts-junior great bks | 1 |
| Scientific biographies | 1 |
| Young adult authors | 1 |

Table 7. Cont.

| Area Name | Frequency |
|---|---|
| 4. LITERATURE | 41 |
| Poetry | 12 |
| Mythology | 6 |
| Shakespeare | 6 |
| American literature | 5 |
| Drama | 4 |
| American poetry | 2 |
| American authors | 1 |
| American plays | 1 |
| Authorship | 1 |
| English literature | 1 |
| Short stories | 1 |
| Theater | 1 |
| 5. ART | 20 |
| Art | 5 |
| Music | 4 |
| Crafts | 2 |
| Drawing | 2 |
| ART-Western | 1 |
| Cartoons | 1 |
| Colors | 1 |
| Costume | 1 |
| Handicraft | 1 |
| Painters & painting | 1 |
| Puppets | 1 |
| 6. HEALTH | 13 |
| General health | 4 |
| Nutrition | 3 |
| Drugs | 2 |
| Alconol | 1 |
| Fitness | 1 |
| Personal growth | 1 |
| Sexuality | 1 |
| 7. LANGUAGE | 12 |
| English language | 3 |
| Dictionaries | 2 |
| Foreign languages | 2 |
| German | 1 |
| Grammar | 1 |
| Latin | 1 |
| Linguistics | 1 |
| Sign language | 1 |
| 8. SPORTS | 12 |
| Sports | 7 |
| Games | 3 |
| Ball games | 1 |
| Recreation | 1 |
| 9. VOCATIONAL EDUCATION | 10 |
| Agriculture | 1 |
| Careers | 9 |
| 10. HOME ECONOMICS | 7 |
| Cookbooks | 4 |
| Food | 2 |
| Home economics | 1 |
| 11. PROFESSIONAL COLLECTION | 5 |
| Prof. coll. (general) | 4 |
| Teacher aids | 1 |
| 12. PSYCHOLOGY | 5 |
| Exceptional children | 2 |
| Applied psychology | 1 |
| Child development | 1 |
| Para-psych. & psych. | 1 |
| 13. REFERENCE | 2 |
| Reference (general) | 2 |
| 14. LANGUAGE ARTS | 1 |
| Creative writing | 1 |
| 15. RELIGION | 1 |
| Religion (general) | 1 |
| 16. OTHERS | 1 |
| Controversial knowledge | 1 |

Table 7 is instructive because it reflects the diverse curriculum areas included in the schools. High frequency of collections in topics such as U.S. history, states, Indians of North America, animals, folklore & fairy tales, picture books, poetry, and astronomy indicates that those are the most common curriculum areas in the country which are well supported by library media resources. Those areas might also be the collection targets that current library media specialists tend to build constantly. A comparison of topics missing on the list but included in a school's curriculum would indicate neglect in the collection building policy. In this case, the library media specialist might make an analysis of the reasons for collection overlap and collection neglect. Topics which are unique in one of the 68 collections give an idea of collection breadth. Schools that have large collections of Renaissance history, costume, horticulture, etc. are important in resource sharing networks. These are the collections which could be shared effectively among the schools in a network. Resource sharing is advantageous among schools if collections are diverse. To summarize Table 7, the emphasis areas were combined further into 15 central curricular subjects and ranked. Table 8 gives these rankings.

Table 8. Number of Emphasis Areas Grouped According to Curriculum Topics

| Curriculum Topics | Total # of Areas Mentioned | # of Discrete Areas |
|---|---|---|
| Social Sci. | 134 | 38 |
| Science | 112 | 22 |
| Reading | 85 | 16 |
| Literature | 41 | 13 |
| Art | 20 | 11 |
| Health | 13 | 7 |
| Language | 12 | 9 |
| Sports | 12 | 4 |
| Voed. | 10 | 2 |
| Home Ec. | 7 | 3 |
| Prof. Coll. | 5 | 4 |
| Psychology. | 5 | 2 |
| Reference | 2 | 1 |
| Lang. arts | 1 | 1 |
| Religion | 1 | 1 |
| Others | 1 | 1 |
| Total | 462 | 134 |

An analysis of Table 8 reveals that emphasis areas dominate in social studies, science, and collections dealing with reading and literature. These are the curriculum areas which will be served best by the "typical" school library media collection.

III. Library Media Collection and National Selection Lists

In this study, the collections of the 68 participating schools were compared with the nationally recognized selection lists: Elementary School Library Collection, Junior High School Library Catalog, and Senior High School Library Catalog. The current editions of the recommended lists contain titles which are considered representative in many topical areas, but some areas predominate. Table 9 lists the percentages of materials in each of the Dewey Decimal classes.

Table 9. Recommended List Percentages

| Dewey Area | Elementary | Junior High | High |
|---|---|---|---|
| Ref. | 1.82 | 3.00 | 3.00 |
| 000 | 0.82 | 1.59 | 1.32 |
| 100 | 1.08 | 1.82 | 1.81 |
| 200 | 1.08 | 1.10 | 1.71 |
| 300 | 5.09 | 10.63 | 13.74 |
| 398.2 | 6.11 | 0.00 | 0.00 |
| 400 | 0.80 | 1.40 | 1.87 |
| 500 | 10.29 | 11.55 | 4.60 |
| 600 | 6.70 | 9.73 | 7.15 |
| 700 | 6.31 | 13.65 | 7.93 |
| 800 | 2.50 | 1.84 | 13.85 |
| 900 | 5.45 | 13.45 | 15.89 |
| B | 3.47 | 10.12 | 12.60 |
| Fic | 23.52 | 15.27 | 9.42 |
| SC | 1.13 | 2.35 | 2.61 |
| Easy | 15.87 | 0.00 | 0.00 |
| Period. | 1.64 | 0.50 | 0.50 |
| Prof. | 6.32 | 2.00 | 2.00 |
| Total | 100.00 | 100.00 | 100.00 |

Interpretation: 1.82% of the titles included in the elementary list are reference materials.

Note: None of the Wilson lists have a separate reference or professional collection. The researchers

had to estimate the size of these collections through careful analysis of each Dewey section.

In a practical sense, Table 9 suggests that a library media specialist might use the national list percentages as purchasing guidelines. A number of specialists have had such purchasing targets, but such a practice has dubious value. It is, however, helpful to compare a school's collection against the standard list as a preliminary step in collection mapping. The library media specialist who is new to a collection might create a chart like Table 10 to assist in the identification of emphasis collections. The library media specialist examining Table 10 would examine the Reference section, 500's, 900's, Biography, and Easy sections first in order to identify emphasis collections. The total collection chart, however, would not help identify emphasis collections which would span several Dewey classes.

Table 10 Total Collection Chart

School Name:

No. of Students: 597

Total Collection: 8289

No. of Total Collection Items Per Student: 13.88

| Dewey Area | Recommended List % | Should Have | Actually Have | Discrepancy | Likely Emphasis Area | Areas That May Need Purchase |
|---|---|---|---|---|---|---|
| Ref. | 1.82 % | 151 | 259 | 108 | * | |
| 000 | 0.82 % | 68 | 86 | 18 | | |
| 100 | 1.08 % | 90 | 39 | -51 | | |
| 200 | 1.08 % | 90 | 56 | -34 | | |
| 300 | 5.09 % | 422 | 407 | -15 | | |
| 398.2 | 6.11 % | 506 | 305 | -201 | | * |
| 400 | 0.8 % | 66 | 110 | 44 | | |
| 500 | 10.29 % | 853 | 1112 | 259 | * | |
| 600 | 6.7 % | 555 | 499 | -56 | | |
| 700 | 6.31 % | 523 | 516 | -7 | | |
| 800 | 2.5 % | 207 | 247 | 40 | | |
| 900 | 5.45 % | 452 | 981 | 529 | * | |
| B | 3.47 % | 288 | 496 | 208 | * | |
| Fic | 23.52 % | 1950 | 1343 | -607 | | * |
| SC | 1.13 % | 94 | 61 | -33 | | |
| Easy | 15.87 % | 1315 | 1641 | 326 | * | |
| Period. | 1.64 % | 136 | 19 | -117 | | * |
| Prof. | 6.32 % | 524 | 112 | -412 | | * |

When all the schools in the study were compared to their respective national list, some interesting data were generated. Table 11 compares all the elementary collections in the study to the Elementary School Library Collection percentages.

Table 11. Distribution of Collections - Elementary Schools

| Dewey Area | % in School Collections | Recommended List % | Difference in % |
|---|---|---|---|
| Ref. | 1.72 | 1.82 | -0.1 |
| 000 | 1.02 | 0.82 | 0.2 |
| 100 | 0.54 | 1.08 | -0.54 |
| 200 | 0.61 | 1.08 | -0.47 |
| 300 | 6.58 | 5.09 | 1.49 |
| 398.2 | 3.43 | 6.11 | -2.68 |
| 400 | 0.73 | 0.8 | -0.07 |
| 500 | 12.91 | 10.29 | 2.62 |
| 600 | 6.29 | 6.7 | -0.41 |
| 700 | 5.84 | 6.31 | -0.47 |
| 800 | 2.67 | 2.5 | 0.17 |
| 900 | 10.31 | 5.45 | 4.86 |
| B | 5.23 | 3.47 | 1.76 |
| Fic | 21.20 | 23.52 | -2.32 |
| SC | 0.62 | 1.13 | -0.51 |
| Easy | 18.22 | 15.87 | 2.35 |
| Period. | 0.28 | 1.64 | -1.36 |
| Prof. | 1.71 | 6.32 | -4.61 |
| Total | 99.91 | 100.0 | |

Table 11 shows that more than 62 percent of an average elementary school's library holdings were in 4 categories. These categories in ranking order were: Fiction (21.20%), Easy (18.22%), 500's (12.91%), and 900's (10.31%). When compared to the recommended list percentages, an average elementary school maintained more materials in 900's, 500's, and easy sections than the recommended list. Practically, this means that the national list is not as helpful in some areas as it might be. For example, a library media specialist who needs hundreds of easy books to assist beginning readers will find very little help in the list. The specialist would also need additional bibliographies to develop the 900's and 500's collections further.

The Brodart list contained more materials in the areas of the Professional collection, 398.2's and Fiction than the schools in the study. This means that library media specialists needing to build large collections in these areas could use the recommended list to good advantage.

Table 12 compares the collections in the junior high schools of the study with Junior High School Library Catalog.

Table 12. Distribution of Collections - Junior High Schools

| Dewey Area | % in School Collections | Recommended List % | Difference in % |
|---|---|---|---|
| Ref. | 6.27 | 3.0 | 3.27 |
| 000 | 1.05 | 1.59 | -0.54 |
| 100 | 0.81 | 1.82 | -1.01 |
| 200 | 0.85 | 1.1 | -0.25 |
| 300 | 8.46 | 10.63 | -2.17 |
| 400 | 1.28 | 1.4 | -0.12 |
| 500 | 10.75 | 11.55 | -0.8 |
| 600 | 7.71 | 9.73 | -2.02 |
| 700 | 8.61 | 13.65 | -5.04 |
| 800 | 3.82 | 1.84 | 1.98 |
| 900 | 14.54 | 13.45 | 1.09 |
| B | 5.60 | 10.12 | -4.52 |
| Fic | 26.96 | 15.27 | 11.69 |
| SC | 1.52 | 2.35 | -0.83 |
| Period. | 0.35 | 0.5 | -0.15 |
| Prof. | 1.40 | 2.0 | -0.60 |
| Total | 99.98 | 100.00 | |

In the junior high school collections, the top ranking categories were: Fiction (26.96%), 900's (14.54%), and 500's (10.75%). Table 12 indicates that Fiction collection in an average junior high school was significantly larger than that suggested in Junior High School Library Catalog. The reference collection was also larger. On the other hand, Junior High School Library Catalog provided many more titles in 700's, Biography, 300's, and 600's.

Table 13 compares the collections of the 21 high schools in the study to Senior High School Library Catalog.

Table 13. Distribution of Collections - High Schools

| Dewey Area | % of Total Coll. | Recommended List % | Difference in % |
|---|---|---|---|
| Ref. | 5.82 | 3.0 | 2.82 |
| 000 | 1.5 | 1.32 | 0.18 |
| 100 | 1.7 | 1.81 | -0.11 |
| 200 | 0.97 | 1.71 | -0.74 |
| 300 | 12.44 | 13.74 | -1.3 |
| 400 | 1.46 | 1.87 | -0.41 |
| 500 | 8.5 | 4.60 | 3.9 |
| 600 | 7.63 | 7.15 | 0.48 |
| 700 | 7.83 | 7.93 | -0.1 |
| 800 | 9.88 | 13.85 | -3.97 |
| 900 | 15.99 | 15.89 | 0.1 |
| B | 6.12 | 12.60 | -6.48 |
| Fic | 17.12 | 9.42 | 7.7 |
| SC | 1.69 | 2.61 | -0.92 |
| Period. | 0.45 | 0.5 | -0.05 |
| Prof. | 0.89 | 2.0 | -1.11 |
| Total | 99.99 | 100.00 | |

In the high school collections, more than one third of the collection in the average high school was devoted to two categories: Fiction and 900's. The third largest section was the 300's. The schools had significantly more materials in Fiction, 500's, and Reference, while the recommended list was stronger in Biography and 800's.

Conclusions and Recommendations

The main purposes of this study were to test the collection mapping technique and to compare collections of materials in schools with nationally published

recommended lists. The research provided evidence that collection mapping is a viable and effective technique for collection analysis and collection management. It provides a different picture of a collection rather than just size figures. The mapping procedure is simple enough to be done without extensive training and the resulting graphic representation of a collection is not only a representation of collection strengths but also charts strength against a national sample of schools.

The collection mapping technique, as tested in this study, works well in schools with student populations of 500 - 1000. Schools with smaller and larger student bodies would need altered scales. Large schools should have fewer items per student needed for excellence ratings and small schools need more items per student.

The study gave added evidence of the breadth and depth of school library media collections in the country. The library media specialists identified 431 emphasis collections in the 68 schools covering 134 distinct topics. These collections provide sufficient diversity to support a network of resource sharing. The potential to share collections as evidenced in this study is one of the nation's richest untapped resources.

The 1975 national guidelines recommend a minimum of 20,000 items or 40 items per student for every school over 500 students. The guidelines also state that library media specialists in large schools may not wish to achieve the ration of 40 items per student. The schools in this study (which are typical according to national statistics) show that elementary schools have more items per student but smaller collections than secondary schools. In this study, the average collection size for elementary schools was 8,372; for junior highs, 12,521 and 18,306 for high schools. More research needs to be done to establish minimal collection sizes, not just for total collections but for collections to support units of instruction and courses of study. Perhaps size standards for curriculum blocks would be a direction to investigate.

The 1975 guidelines did not specify guidelines for building professional collections. Very few of the schools in this study had sizeable professional collections. In some districts, library media specialists noted that professional materials were held at the district level rather than the school. In others, these collections were very small or non-existent.

The second aspect of the study, the comparison of collections to nationally published lists, provided new insights into the composition of the recommended lists vs. actual collections of materials. Library media specialists generally build collections to support supplementary reading and subject oriented collections which serve social studies, literature and science. It is not surprising that school library collections and services only appeal to a part of the total curriculum and teaching staff in a school.

The study clearly pointed out that school library media specialists build different collections than national lists recommend. National lists contain emphasis collections which have developed over a period of time which need re-examination in light of current school curriculum. The orientation of national lists toward what publishers publish is as troubling as the narrow focus of the collections in schools.

If school collections are to support the total curriculum, library media specialists need to map their collections and create acquisition targets which match their curriculum--then channel their money into those areas. Publishers of national lists need to re-assess their lists regularly and adjust the scope to truly reflect the curriculum of the nation's schools. H. W. Wilson, for example, hasn't yet discovered that audiovisual media are as basic as books in an educational institution. Considering the current curriculums and the availability of computer technology, perhaps it is time to suggest that both H.W. Wilson and Brodart rethink the "raison d'etra" and the methodology of creating their publications. Perhaps core titles and emphasis collections could be made available on floppy disks on a subscription basis and/or on-line. Such a data base could be under continuous revision and could expand far beyond the current efforts toward core materials only. If printed books continue to go out of print as has happened in the past few years, the value of a printed list is questionable.

Perhaps the best advice to library media specialists from this research is to build collections in topical segments rather than just buying "things." Nationally published core lists may be useful in building a few basic materials in a topical area but to build strength and depth into a collection requires a different approach.

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